

DERWENT-ACC-NO: 2001-476681

DERWENT-WEEK: 200627

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TITLE: Double metal cyanide catalyst for polyether-  
polyol  
production contains double metal cyanide  
compound,  
organic ligand, e.g. tertiary-butanol, and two  
or more  
complex-formers such as functional polymers or  
phosphorus  
compounds

INVENTOR: EHLERS, S; HOFMANN, J ; OOMS, P ; STEINLEIN, C

PATENT-ASSIGNEE: BAYER AG[FARB] , BAYER MATERIALSCIENCE AG[FARB]

PRIORITY-DATA: 1999DE-1053546 (November 8, 1999)

PATENT-FAMILY:

PUB-NO	MAIN-IPC	PUB-DATE	LANGUAGE
PAGES			
MX 229461 B		July 26, 2005	N/A
000	B01J 027/26		
DE <u>19953546</u> A1		May 10, 2001	N/A
009	B01J 031/22		
AU 200112757 A		June 6, 2001	N/A
000	B01J 027/26		
WO 200134297 A2		May 17, 2001	G
000	B01J 027/26		
BR 200015395 A		July 2, 2002	N/A
000	B01J 027/26		
EP 1239957 A2		September 18, 2002	G
000	B01J 027/26		
CZ 200201552 A3		October 16, 2002	N/A
000	B01J 027/26		
KR 2002059698 A		July 13, 2002	N/A
000	B01J 027/26		
CN 1387460 A		December 25, 2002	N/A
000	B01J 027/26		
JP 2003514073 W		April 15, 2003	N/A
047	C08G 065/28		
HU 200203685 A1		April 28, 2003	N/A
000	B01J 027/26		
MX 2002004552 A1		November 1, 2002	N/A
000	B01J 027/26		

EP 1428575 A2	June 16, 2004	G
000 B01J 027/26		
EP 1428576 A1	June 16, 2004	G
000 B01J 027/26		
CN 1494947 A	May 12, 2004	N/A
000 B01J 027/26		
EP 1239957 B1	April 6, 2005	G
000 B01J 027/26		
DE 50010010 G	May 12, 2005	N/A
000 B01J 027/26		
RU 2254164 C2	June 20, 2005	N/A
000 B01J 027/26		
US 6919293 B1	July 19, 2005	N/A
000 B01J 031/00		
ES 2240194 T3	October 16, 2005	N/A
000 B01J 027/26		
CN 1144616 C	April 7, 2004	N/A
000 B01J 027/26		

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR  
 CU CZ DE  
 DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
 LC LK LR  
 LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK  
 SL TJ TM  
 TR TT TZ UA UG US UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH  
 GM GR IE  
 IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW AL AT BE CH CY DE  
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 LI LU MC  
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 SE

# APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
MX 229461B	N/A	2000WO-EP10550
October 26, 2000		
MX 229461B	N/A	2002MX-0004552
May 7, 2002		
MX 229461B	Based on	WO 200134297
N/A		
DE 19953546A1	N/A	1999DE-1053546
November 8, 1999		
AU 200112757A	N/A	2001AU-0012757
October 26, 2000		

AU 200112757A	Based on	WO 200134297
N/A		
WO 200134297A2	N/A	2000WO-EP10550
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BR 200015395A	N/A	2000BR-0015395
October 26, 2000		
BR 200015395A	N/A	2000WO-EP10550
October 26, 2000		
BR 200015395A	Based on	WO 200134297
N/A		
EP 1239957A2	N/A	2000EP-0974461
October 26, 2000		
EP 1239957A2	N/A	2000WO-EP10550
October 26, 2000		
EP 1239957A2	Based on	WO 200134297
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CZ 200201552A3	N/A	2000WO-EP10550
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CZ 200201552A3	N/A	2002CZ-0001552
October 26, 2000		
CZ 200201552A3	Based on	WO 200134297
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KR2002059698A	N/A	2002KR-0705872
May 7, 2002		
CN 1387460A	N/A	2000CN-0815309
October 26, 2000		
JP2003514073W	N/A	2000WO-EP10550
October 26, 2000		
JP2003514073W	N/A	2001JP-0536289
October 26, 2000		
JP2003514073W	Based on	WO 200134297
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HU 200203685A1	N/A	2000WO-EP10550
October 26, 2000		
HU 200203685A1	N/A	2002HU-0003685
October 26, 2000		
HU 200203685A1	Based on	WO 200134297
N/A		
MX2002004552A1	N/A	2000WO-EP10550
October 26, 2000		
MX2002004552A1	N/A	2002MX-0004552
May 7, 2002		
MX2002004552A1	Based on	WO 200134297
N/A		
EP 1428575A2	Div ex	2000EP-0974461
October 26, 2000		
EP 1428575A2	N/A	2004EP-0005548
October 26, 2000		
EP 1428575A2	Div ex	EP 1239957
N/A		

EP 1428576A1	Div ex	2000EP-0974461
October 26, 2000		
EP 1428576A1	N/A	2004EP-0005549
October 26, 2000		
EP 1428576A1	Div ex	EP 1239957
N/A		
CN 1494947A	N/A	2003CN-0158465
October 26, 2000		
EP 1239957B1	N/A	2000EP-0974461
October 26, 2000		
EP 1239957B1	N/A	2000WO-EP10550
October 26, 2000		
EP 1239957B1	Related to	2004EP-0005548
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EP 1239957B1	Related to	2004EP-0005549
October 26, 2000		
EP 1239957B1	Related to	EP 1428575
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EP 1239957B1	Related to	EP 1428576
N/A		
EP 1239957B1	Based on	WO 200134297
N/A		
DE 50010010G	N/A	2000DE-0510010
October 26, 2000		
DE 50010010G	N/A	2000EP-0974461
October 26, 2000		
DE 50010010G	N/A	2000WO-EP10550
October 26, 2000		
DE 50010010G	Based on	EP 1239957
N/A		
DE 50010010G	Based on	WO 200134297
N/A		
RU 2254164C2	N/A	2000WO-EP10550
October 26, 2000		
RU 2254164C2	N/A	2002RU-0115639
October 26, 2000		
RU 2254164C2	Based on	WO 200134297
N/A		
US 6919293B1	N/A	2000WO-EP10550
October 26, 2000		
US 6919293B1	N/A	2002US-0129579
May 7, 2002		
US 6919293B1	Based on	WO 200134297
N/A		
ES 2240194T3	N/A	2000EP-0974461
October 26, 2000		
ES 2240194T3	Based on	EP 1239957
N/A		
CN 1144616C	N/A	2000CN-0815309
October 26, 2000		

1494947 A , EP 1239957 B1 , DE 50010010 G  
INT-CL (IPC): B01J027/26 , B01J031/00 , B01J031/02 , B01J031/06 ,  
B01J031/22 , B01J031/26 , C07F003/06 , C07F009/40 , C07F015/06 ,  
C07F019/00 , C08F004/50 , C08F004/60 , C08G065/00 , C08G065/02 ,  
C08G065/10 , C08G065/26 , C08G065/28 , C08L071/02

ABSTRACTED-PUB-NO: DE 19953546A

BASIC-ABSTRACT:

NOVELTY - Double metal cyanide catalysts containing, in addition to  
(a) double  
metal cyanides and (b) organic ligands, (c) 2 or more complex-formers  
other  
than (b) comprising functionalized polymers such as polyethers or  
polyacrylamide (26 types listed) or compounds such as glycidyl  
ethers,  
cyclodextrins, gallic acid or phosphorus compounds (11 types listed).

DETAILED DESCRIPTION - Double metal cyanide (DMC) catalyst containing  
(a) DMC  
compound(s), (b) organic complex ligand(s) other than (c), (c) two or  
more  
complex-forming components (other than b) comprising functionalized  
polymers  
selected from polyethers, polyesters, polycarbonates, polyalkylene  
glycol  
sorbitan esters, polyalkylene glycol glycidyl ethers, polyacrylamide,  
acrylamide-acrylic acid copolymers, polyacrylic acid, acrylic acid-  
maleic acid  
copolymers, polyacrylonitrile, poly(meth)acrylates, poly-vinyl methyl  
ether,  
poly-vinyl ethyl ether, polyvinyl acetate, polyvinyl alcohol,  
poly-(N-vinylpyrrolidone), N-vinylpyrrolidone-acrylic acid  
copolymers,  
poly-vinyl methyl ketone, poly-(4-vinylphenol), acrylic acid-styrene  
copolymers, oxazoline polymers, polyalkylene-imines, maleic acid or  
anhydride  
copolymers, hydroxyethylcellulose and polyacetals, or glycidyl  
ethers,  
glycosides, carboxylate esters of polyhydric alcohols, gallic acids  
and their  
salts, esters or amides, cyclodextrins, phosphorus compounds, alpha ,  
beta  
-unsaturated carboxylate esters and ionic surface-active or  
interfacially  
active compounds. INDEPENDENT CLAIMS are also included for:

(i) production of DMC catalysts by (1) reacting (A) metal salts and metal cyanide salts in aqueous solution with (B) complex ligands selected from functionalized polymers, glycidyl ethers, glycosides, carboxylate esters of polyhydric alcohols, gallic acids or their salts, esters or amides, cyclodextrins, phosphorus compounds, alpha , beta -unsaturated carboxylic acid esters or ionic surface- or interfacially-active compounds and (C) 2 or more complex-formers (c) as above and then (2) isolating, washing and drying the catalyst;

(ii) production of polyether-polyols by reaction of alkylene oxides with H-functional starter compounds in presence of DMC catalysts as above; and

(iii) polyether-polyols obtained by this process.

USE - For the production of polyether-polyols by polyaddition of alkylene oxides to starter compounds with active hydrogen atoms (claimed). The polyols obtained are used for the production of polyurethanes.

ADVANTAGE - Improved double metal cyanide catalysts with greatly increased activity, enabling shorter alkoxylation times and more economical production of polyether-polyols (ideally using so little catalyst that the product can be used directly for the production of polyurethane without removing catalyst residues).

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: DOUBLE METAL CYANIDE CATALYST POLYETHER PRODUCE CONTAIN DOUBLE

METAL CYANIDE COMPOUND ORGANIC LIGAND TERTIARY BUTANOL  
TWO MORE

COMPLEX FORMER FUNCTION POLYMER PHOSPHORUS COMPOUND

DERWENT-CLASS: A25 A97 E19

CPI-CODES: A02-A06; A02-A07; A05-G03; A05-H01A; A10-E01; A12-W11K; E01; E05-G;

E06-A03; E07-A03B; E10-C03; E10-D03C; E10-E04C; E10-E04L3; E10-G02;  
E32-B; N05-C;

CHEMICAL-CODES:

Chemical Indexing M3 \*01\*

Fragmentation Code

H4 H401 H481 H5 H521 H8 M280 M312 M321 M332  
M342 M383 M391 M423 M730 M782 M904 M905 M910 Q121  
Q421 R023

Specific Compounds

01859K 01859C 01859Q 01859M A016GK A016GC A016GQ A016GM

Registry Numbers

1859S 1859U

Chemical Indexing M3 \*02\*

Fragmentation Code

H7 H714 H721 J5 J581 M210 M211 M212 M262 M282  
M320 M423 M730 M782 M904 M905 Q121 Q421 R023

Specific Compounds

A4FH9K A4FH9C A4FH9Q A4FH9M

Chemical Indexing M3 \*03\*

Fragmentation Code

F011 F012 F423 H2 H211 H7 H713 H721 J5 J521  
L9 L941 M210 M212 M273 M281 M320 M423 M510 M521  
M530 M540 M730 M782 M904 M905 Q121 Q421 R023

Specific Compounds

A002WK A002WC A002WQ A002WM

Chemical Indexing M3 \*04\*

Fragmentation Code

H7 H713 J0 J011 J2 J271 M210 M211 M212 M262  
M272 M281 M423 M510 M520 M530 M540 M730 M782 M904  
M905 Q121 Q421 R023

Specific Compounds

A012NK A012NC A012NQ A012NM

Chemical Indexing M3 \*05\*

Fragmentation Code

H4 H401 H481 H7 H713 H721 H8 M210 M212 M272  
M281 M320 M423 M510 M520 M530 M540 M730 M782 M904  
M905 Q121 Q421 R023

Specific Compounds

A01EAK A01EAC A01EAQ A01EAM

Chemical Indexing M3 \*06\*

Fragmentation Code

H7 H714 H721 K0 L1 L145 M210 M212 M263 M281  
M320 M423 M730 M782 M904 M905 Q121 Q421 R023

Specific Compounds  
A02NXK A02NXC A02NXQ A02NXM

Chemical Indexing M3 \*07\*

Fragmentation Code

H7 H714 H721 J0 J011 J1 J171 M210 M212 M262  
M281 M320 M423 M510 M520 M530 M540 M630 M730 M782  
M904 M905 Q121 Q421 R023

Specific Compounds

A02L0K A02L0C A02L0Q A02L0M A037TK A037TC A037TQ A037TM

Chemical Indexing M3 \*08\*

Fragmentation Code

H7 H714 H721 J0 J011 J1 J171 M210 M213 M262  
M281 M320 M423 M510 M520 M530 M540 M730 M782 M904  
M905 Q121 Q421 R023

Specific Compounds

A07AEK A07AEC A07AEQ A07AEM

Chemical Indexing M3 \*09\*

Fragmentation Code

M730 M782 M905 Q121 Q421 R023

Specific Compounds

A03C2K A03C2C A03C2Q A03C2M

Chemical Indexing M3 \*10\*

Fragmentation Code

H7 H714 H721 J0 J011 J3 J371 M210 M212 M262  
M281 M320 M423 M510 M520 M530 M540 M730 M782 M904  
M905 Q121 Q421 R023

Specific Compounds

A035MK A035MC A035MQ A035MM

Chemical Indexing M3 \*11\*

Fragmentation Code

H4 H401 H481 H8 M210 M214 M233 M272 M281 M320  
M416 M620 M730 M782 M904 M905 M910 Q121 Q421 R023

Specific Compounds

00373K 00373C 00373Q 00373M

Registry Numbers

0373S 0373U

Chemical Indexing M3 \*12\*

Fragmentation Code

A427 A430 A940 A980 C106 C107 C520 C730 C801 C802  
C803 C806 C807 M411 M730 M782 M904 M905 Q121 Q421  
R023

Specific Compounds

A3DAGK A3DAGC A3DAGQ A3DAGM

Chemical Indexing M3 \*13\*

Fragmentation Code

G017 G100 H4 H403 H443 H8 J0 J011 J1 J131  
M280 M320 M414 M510 M520 M531 M540 M730 M782 M904  
M905 M910 Q121 Q421 R023

Specific Compounds

01170K 01170C 01170Q 01170M 09472K 09472C 09472Q 09472M

Registry Numbers

1170S 1170U

Chemical Indexing M3 \*14\*

Fragmentation Code

B415 B701 B712 B720 B741 B815 B831 J0 J011 J2  
J271 M210 M212 M272 M283 M312 M321 M331 M340 M342  
M349 M361 M391 M411 M510 M520 M530 M540 M620 M730  
M782 M904 M905 Q121 Q421 R023

Specific Compounds

A4FHHK A4FHHC A4FHHQ A4FHHM

Chemical Indexing M3 \*15\*

Fragmentation Code

J0 J013 J2 J273 M210 M215 M231 M262 M283 M313  
M321 M332 M343 M383 M391 M416 M620 M730 M782 M904  
M905 Q121 Q421 R023

Specific Compounds

12801K 12801C 12801Q 12801M

Chemical Indexing M3 \*16\*

Fragmentation Code

A424 A426 A427 A428 A430 A677 A940 A980 C106 C107  
C520 C730 C801 C802 C803 C806 C807 M411 M730 M782  
M904 M905 Q121 Q421 R023

Markush Compounds

200042-13201-K 200042-13201-C 200042-13201-Q 200042-13201-M

Chemical Indexing M3 \*17\*

Fragmentation Code

F012 F013 F014 F015 F016 F113 F123 H4 H403 H404  
H422 H423 H481 H5 H521 H8 K0 L8 L810 L821  
L831 M210 M211 M212 M213 M214 M215 M216 M220 M221  
M222 M223 M224 M225 M226 M231 M232 M233 M272 M281  
M311 M321 M342 M373 M391 M413 M510 M521 M530 M540  
M730 M782 M904 M905 Q121 Q421 R023

Markush Compounds

200042-13203-K 200042-13203-C 200042-13203-Q 200042-13203-M

Chemical Indexing M3 \*18\*

Fragmentation Code

F012 F019 F100 F199 H583 H584 H589 L660 L699 M280  
M311 M312 M313 M314 M315 M316 M321 M322 M323 M331

M332 M333 M340 M342 M373 M383 M391 M392 M393 M413  
M510 M521 M522 M530 M540 M730 M782 M904 M905 Q121  
Q421 R023  
Ring Index  
00012  
Markush Compounds  
200042-13202-K 200042-13202-C 200042-13202-Q 200042-13202-M

Chemical Indexing M3 \*19\*

Fragmentation Code  
B415 B713 B720 B813 B831 M210 M211 M212 M213 M214  
M215 M216 M220 M221 M222 M223 M224 M225 M226 M231  
M232 M233 M272 M283 M320 M411 M510 M520 M530 M540  
M620 M730 M782 M904 M905 Q121 Q421 R023  
Markush Compounds  
200042-13206-K 200042-13206-C 200042-13206-Q 200042-13206-M

Chemical Indexing M3 \*20\*

Fragmentation Code  
B415 B701 B712 B720 B741 B815 B831 M210 M211 M212  
M213 M214 M215 M216 M220 M221 M222 M223 M224 M225  
M226 M231 M232 M233 M250 M272 M281 M282 M320 M411  
M510 M520 M530 M540 M620 M730 M782 M904 M905 Q121  
Q421 R023  
Markush Compounds  
200042-13205-K 200042-13205-C 200042-13205-Q 200042-13205-M

Chemical Indexing M3 \*21\*

Fragmentation Code  
B415 B701 B713 B720 B815 B831 M210 M211 M212 M213  
M214 M215 M216 M220 M221 M222 M223 M224 M225 M226  
M231 M232 M233 M272 M283 M320 M411 M510 M520 M530  
M540 M620 M730 M782 M904 M905 Q121 Q421 R023  
Markush Compounds  
200042-13204-K 200042-13204-C 200042-13204-Q 200042-13204-M

Chemical Indexing M3 \*22\*

Fragmentation Code  
J0 J011 J3 J371 M210 M211 M212 M213 M214 M215  
M216 M220 M221 M222 M223 M224 M225 M226 M231 M232  
M233 M262 M281 M320 M416 M620 M730 M782 M904 M905  
Q121 Q421 R023  
Markush Compounds  
200042-13209-K 200042-13209-C 200042-13209-Q 200042-13209-M

Chemical Indexing M3 \*23\*

Fragmentation Code  
J0 J011 J2 J271 M210 M211 M212 M213 M214 M215  
M216 M220 M221 M222 M223 M224 M225 M226 M231 M232  
M233 M262 M272 M281 M320 M416 M620 M730 M782 M904

M905 Q121 Q421 R023  
Markush Compounds  
200042-13208-K 200042-13208-C 200042-13208-Q 200042-13208-M

Chemical Indexing M5 \*24\*

Fragmentation Code  
M730 M782 M904 M905 M910 Q121 Q421 R023  
Specific Compounds  
07862K 07862C 07862Q 07862M  
Registry Numbers  
0486S 0486U

Chemical Indexing M3 \*25\*

Fragmentation Code  
H4 H402 H403 H404 H405 H482 H483 H484 H5 H582  
H583 H584 H589 H8 L630 L660 L699 M280 M311 M312  
M313 M314 M315 M316 M321 M322 M323 M331 M332 M333  
M334 M340 M342 M343 M344 M383 M393 M416 M620 M720  
M904 M905 N153 N205 N209 N242 N262 N309 N342 N362  
N442 N513 N522 Q110  
Markush Compounds  
200042-13207-K 200042-13207-P

Chemical Indexing M3 \*26\*

Fragmentation Code  
H4 H402 H482 H5 H589 H8 M280 M313 M323 M332  
M342 M383 M393 M423 M510 M520 M530 M540 M620 M730  
M904 M905  
Specific Compounds  
23531K 23531S

Chemical Indexing M3 \*27\*

Fragmentation Code  
F012 F100 M210 M211 M240 M281 M320 M413 M510 M521  
M530 M540 M730 M904 M905 M910  
Ring Index  
00012  
Specific Compounds  
00370K 00370S  
Registry Numbers  
0370S 0370U

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0370S; 0370U ; 0373S ; 0373U ;  
0486S ; 0486U  
; 1170S ; 1170U ; 1859S ; 1859U

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1]  
018 ; G1558\*R D01 F47 ; H0000 ; H0237\*R ; P0055 ; L9999 L2573  
L2506

; L9999 L2200 ; L9999 L2744 L2733 ; M9999 M2153\*R ; M9999 M2200  
; M9999 M2324 ; P1036 P0964 F34 D01 ; S9999 S1376 ; P0975\*R P0964  
F34 D01 D10  
Polymer Index [1.2]  
018 ; R00370 G1558 D01 D11 D10 D23 D22 D31 D42 D50 D73 D83 F47 ;  
H0000 ; H0237\*R ; P0055 ; L9999 L2573 L2506 ; L9999 L2200 ; L9999  
L2744 L2733 ; M9999 M2153\*R ; M9999 M2200 ; M9999 M2324 ; P1036  
P0964 F34 D01 ; S9999 S1376 ; P8015 P0975 P0964 D01 D10 D11 D50  
D83 F34  
Polymer Index [1.3]  
018 ; ND02 ; B9999 B4535 ; B9999 B3703 B3690 ; B9999 B5083 B4977  
B4740 ; B9999 B4900 B4740 ; B9999 B3587 B3554 ; N9999 N6735\*R  
N6655  
Polymer Index [1.4]  
018 ; D00 D01 D61\*R F12 K\* 1A Co 8B Tr Gm Zn 2B D23 D22 D31 D73  
D42 F34 F47 F90 F41 F91 D63 F33 F30 F36 F35 D19 D18 D76 D50 D60  
F70\*R P\* 5A D12 D10 D58 D08 D17 D13 D34 D79 D94 D95 ; R00373  
G3496  
D01 D10 D11 D50 D84 F26 F27 ; C999 C102 C000 ; C999 C340 ; C999  
C157 ; C999 C248 ; C999 C328 ; C999 C306 ; K9621\*R  
Polymer Index [2.1]  
018 ; G1558\*R D01 F47 ; R00370 G1558 D01 D11 D10 D23 D22 D31 D42  
D50 D73 D83 F47 ; H0011\*R ; H0077 H0044 H0011 ; P0055 ; P1058\*R  
P1592 P0964 H0260 F34 F77 H0044 H0011 D01  
Polymer Index [2.2]  
018 ; ND04  
Polymer Index [3.1]  
018 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999 L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; P0964\*R F34 D01  
Polymer Index [3.2]  
018 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999 L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; P0839\*R F41 D01 D63  
Polymer Index [3.3]  
018 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999 L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; P0862 P0839 F41 F44  
D01 D63  
Polymer Index [3.4]  
018 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999 L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; P1707 P1694 D01  
Polymer Index [3.5]  
018 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999 L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; P1376 D01 D11 D10  
F70  
Polymer Index [3.6]  
018 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999 L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; P1116 P1105 D01 D10  
F07  
Polymer Index [3.7]  
018 ; R01859 G3678 G3634 D01 D03 D11 D10 D23 D22 D31 D42 D50 D76  
D92 F24 F29 F26 F34 H0293 P0599 G3623 ; M9999 M2379\*R ; M9999

M2835  
; L9999 L2391 ; L9999 L2379\*R ; L9999 L2835 ; C999 C033 C000 ;  
C999  
C157  
Polymer Index [3.8]  
018 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999 L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; P0248 P0226 D01 F24  
Polymer Index [3.9]  
018 ; G1558\*R D01 F47 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391  
; L9999 L2379\*R ; L9999 L2835 ; C999 C033 C000 ; C999 C157 ;  
H0000  
; P0055 ; P0975\*R P0964 F34 D01 D10 ; M9999 M2153\*R ; M9999 M2186  
; M9999 M2200  
Polymer Index [3.10]  
018 ; G0340\*R G0339 G0260 G0022 D01 D12 D10 D26 D51 D53 D58 D63  
F41 F89 G0384\*R G0635 D23 D22 D31 D41 D75 D86 F71 G0179 G0102 D19  
D18 D76 D88 F31 F30 D11 ; R00446 G0282 G0271 G0260 G0022 D01 D12  
D10 D26 D51 D53 D58 D60 D83 F36 F35 ; R00444 G0453 G0260 G0022  
D01  
D12 D10 D26 D51 D53 D58 D83 F70 F93 ; R00817 G0475 G0260 G0022  
D01  
D12 D10 D26 D51 D53 D58 D83 F12 ; R00824 G0588 G0022 D01 D11 D10  
D12 D51 D53 D58 D83 F34 ; R00892 G0588 G0022 D01 D11 D10 D12 D51  
D53 D58 D84 F34 ; R00835 G0566 G0022 D01 D11 D10 D12 D51 D53 D58  
D63 D84 F41 F89 ; R00438 G0679 G0022 D01 D11 D10 D12 D51 D53 D58  
D84 F23 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ; L9999  
L2379\*R  
; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; H0000 ; P1741 ;  
P0088  
; P0099 ; P0102  
Polymer Index [3.11]  
018 ; R00446 G0282 G0271 G0260 G0022 D01 D12 D10 D26 D51 D53 D58  
D60 D83 F36 F35 ; R00444 G0453 G0260 G0022 D01 D12 D10 D26 D51  
D53  
D58 D83 F70 F93 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ;  
L9999  
L2379\*R ; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; H0022 H0011  
; P0088  
Polymer Index [3.12]  
018 ; R00446 G0282 G0271 G0260 G0022 D01 D12 D10 D26 D51 D53 D58  
D60 D83 F36 F35 ; R00901 G0760 G0022 D01 D12 D10 D51 D53 D59 D60  
D84 F37 F35 E00 E01 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391  
; L9999 L2379\*R ; L9999 L2835 ; C999 C033 C000 ; C999 C157 ;  
H0022  
H0011 ; P0088  
Polymer Index [3.13]  
018 ; G0635 G0022 D01 D12 D10 D23 D22 D31 D41 D51 D53 D58 D75 D86  
F71 ; R00446 G0282 G0271 G0260 G0022 D01 D12 D10 D26 D51 D53 D58  
D60 D83 F36 F35 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391 ;  
L9999

L2379 R ; L9999 L2835 ; C999 C033 C000 ; C999 C157 ; H0022 H0011  
; P0088

Polymer Index [3.14]

018 ; R00708 G0102 G0022 D01 D02 D12 D10 D19 D18 D31 D51 D53 D58  
D76 D88 ; R00446 G0282 G0271 G0260 G0022 D01 D12 D10 D26 D51 D53  
D58 D60 D83 F36 F35 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391  
; L9999 L2379\*R ; L9999 L2835 ; C999 C033 C000 ; C999 C157 ;

H0022

H0011 ; P1741 ; P0088

Polymer Index [3.15]

018 ; R00843 G0760 G0022 D01 D23 D22 D31 D42 D51 D53 D59 D65 D75  
D84 F39 E00 E01 ; R00901 G0760 G0022 D01 D12 D10 D51 D53 D59 D60  
D84 F37 F35 E00 E01 ; M9999 M2379\*R ; M9999 M2835 ; L9999 L2391  
; L9999 L2379\*R ; L9999 L2835 ; C999 C033 C000 ; C999 C157 ;

H0011\*R

; H0293

Polymer Index [3.16]

018 ; R24032 R01863 G3623 D01 D11 D10 D23 D22 D31 D42 D50 D76 D86  
F24 F29 F26 F34 H0293 P0599 ; M9999 M2379\*R ; M9999 M2835 ; L9999  
L2391 ; L9999 L2379\*R ; L9999 L2835 ; C999 C033 C000 ; C999 C157

Polymer Index [3.17]

018 ; ND01 ; Q9999 Q6917

Polymer Index [3.18]

018 ; D00 D61\*R F12 K\* 1A Co 8B Tr Zn 2B Gm ; H0226

Polymer Index [3.19]

018 ; K\* 1A Co 8B Tr Zn 2B Gm ; H0157

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